In the Claims:

This version of the claims replaces and supercedes all prior versions of the claims.

1.   (Cancelled)

2.   (Currently Amended) A sound processor for a cochlear implant having electrodes for

simulating the auditory nerve, including means for receiving sounds, means for processing the

sounds and converting them to electrical stimulation signals for application to the electrodes of

the cochlear implant for stimulation of the auditory nerve, wherein the cochlear implant has basal

electrodes and said sound processing means including means for generating electrical signals to

be applied to the basal electrodes having different predetermined rates of stimulation and ~~The~~

~~sound processor of claim 1, wherein the cochlear implant has one form of the invention,~~ the

cochlear implant has ~~basal electrodes and~~ apical electrodes and the means for generating

electrical signals to be applied to the apical electrodes have a different rate of stimulation, the

electrical signals to be applied to the basal electrodes having a higher rate of stimulation than the

electrical signals to be applied to the apical electrodes.

3.   (Original) The sound processor of claim 2, wherein the more apical electrodes are

selected for stimulator signals that represents the voice bar and lower formants of the sounds.

4.   (Original) The sound processor of claim 3, where the more apical electrodes apply

stimulation signals having a stimulation rate of between about 250 cycles per second and about

800 cycles per second depending on the user, to provide precise spectral and place of articulation

information.

5.   (Currently Amended) The sound processor of claim 2, ~~any one of claims 2 to 4~~ wherein

the more basal electrodes apply stimulation signals having a stimulation rate of at or above about

800 cycles per second depending on the user, to provide precise information about temporal events and frication.

6. (Currently Amended) The sound processor of claim 2, ~~of any one of claims 2 to 5~~ wherein the sound processor includes, ~~including~~ a twenty (20) electrode implant, the apical electrodes are electrodes 0 to 12 and the basal electrodes are electrodes 13 to 19, the apical electrodes representing sound frequencies from 0 to about 2700 Hz, while the basal electrodes represent frequencies from about 2700 Hz to about 7900 Hz, the apical electrode frequencies, are sufficient to contain the first three formants of most speakers speech.

7. (Currently Amended) The sound processor of claim 2, ~~any one of claims 2 to 6~~ wherein the apical electrodes are stimulated at about 250 cycles per second ~~while~~ and basal electrodes are stimulated at about 1500 cycles per second.

8. (Currently Amended) The sound processor of claim 7, wherein ~~the threshold (T) levels and comfort (C) levels of the patient are carefully set~~, the electrodes to be stimulated are chosen by selecting ~~the~~ eight largest spectral energies within filter banks derived from ~~the~~ a Fast Fourier Transform (FFT) or ~~the~~ a Discrete Wavelet Transform (DWT) which is performed by the processor.

9 (Currently Amended) A sound processor as claimed in claim 2, wherein ~~for a cochlear implant having electrodes for simulating the auditory nerve, including means for receiving sounds, means for processing the sounds and converting to electrical stimulation signals for application to the electrodes of the cochlear implant whereby the auditory never is electrically stimulated,~~ said sound processing means ~~having~~ include means for varying the ~~overall~~ rate of stimulation of the electrical stimulation signals depending on the-parameters of ~~the~~ sound received by the sound receiving means.

10.   (Currently Amended) The sound processor of claim 9, wherein the sound processing means

is programmed to continually adjust the rate of stimulation of the electrical stimulation signals

depending on the parameters of the ~~incoming speech~~ received sound signal ~~to this end, the incoming~~

~~speech signal will be processed to detect events that are better represented using a higher rate of~~

~~stimulation~~.

11.   (Cancelled)

12.   (Currently Amended) The sound processor of claim 2 ~~any preceding claim~~, wherein the

implant is one which uses pulsatile stimulation.

13.   (Currently Amended) The sound processor of claim 2, ~~any preceding claim~~ wherein the

means for processing the sounds [[a]] include a SPEAR processing device ~~is~~ programmed using

~~the~~ a Differential Rate Sound Processor (DRSP) program ~~defined in any preceding claim~~ to

optimally present the features of speech to the implant.

14.   (New) The sound processor of claim 9, wherein the received sound signal is processed to

detect events that are better presented using a higher rate of stimulation.